

Question: What is the difference between analogue and HD CCTV video images?

Answer: Images are made up of pixels, a small dot or square of colour so in simple terms the more pixels an image has the more detailed the picture is.

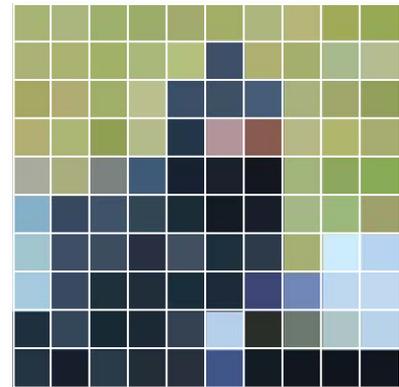
Images are made up of pixels, a small dot or square of colour so in simple terms the more pixels an image has the more detailed the picture is, as this example below shows:

An image with just 100 pixels looks entirely different to an image with 100,000 pixels.

In one image you can see the face of the car thief; in the other image the face is entirely indistinguishable.



100,000 pixels



100 pixels

Imagine the high definition with over 2 million pixels. Many cheap analogue DVRs available record in what is known as CIF resolution and the higher end analogue models in 4CIF which is 4 times the quality of CIF. HD on the other hand records at a massive 20x the CIF quality, here are the actual facts below.

CCTV Resolutions: (PAL UK Standard)

Term	Pixels (W x H)	Total Pixels	Notes
QCIF	176 x 144	25,344	Quarter CIF – mainly for mobile phone monitoring
CIF	352 x 288	101,376	Low end analogue DVR
2CIF	704 x 288	202,752	Mid range analogue DVR
VGA	640 x 480	307,200	Standard VGA output
4CIF	704 x 576	405,504	Higher End Analogue DVR
D1	720 x 576	414,720	Higher End Analogue DVR
720p HD	1280 x 720	921,600	720p High Definition
960p HD	1280 x 960	1,228,800	960p High Definition (Sony specific HD standard)
1.3 MP	1280 x 1024	1,310,720	1 Megapixel – Some IP Systems
2 MP	1600 x 1200	1,920,000	1.9 Megapixel – Some IP Systems
1080p HD	1920 x 1080	2,073,600	1080p High Definition – alien HD DVRs
3 MP	2048 x 1536	3,145,728	3 Megapixel – Some IP Systems
5 MP	2592 x 1944	5,038,848	5 Megapixel – Some IP Systems

This CCTV installation tip is aimed at helping you to install CCTV equipment. If you are looking for answers on "how to fit CCTV" or perhaps "how to network a DVR or NVR" or even "how to get CCTV on your mobile phone" why not check out our full range of CCTV installation tips at: www.systemq.com

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Let's look at what that 20x ratio actually means in terms of picture quality...

CIF
(Cheap Analogue DVR)

Total Pixel Count:
352 x 288 = **101,376px**

20x Quality!

HD 1080p
(alien HD DVR)

Total Pixel Count:
1920 x 1080 = **2,073,600px**

You'll hear HD CCTV cameras referred to quite commonly as 1080P this is where they get the terms from.

In terms of security systems anyway it is better to look at value for money rather than just simple costs as you either catch the criminal or you don't!

HD 1080p
value for money

VS

CIF
waste of money?

Which is better value for money in your opinion?
The argument for HD seems crystal clear...

Quality vs Cost

In terms of the quality vs cost argument, sure High Definition (HD) systems may have a higher price tag than a cheap low end analogue CIF but they offer **20x the quality & not at 20x the price**. At most the cost may be 2-3 times more than a cheaper CIF model.

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